

PLATE, A. F.

*Feb. 1953
organic chem - homocyclic*

The aromatisation of $\alpha, \beta, \beta, 4$ -trimethylpentane over molybdenum catalyst. A. F. Plate and O. A. Golovina (*J. gen. Chem. USSR*, 1950, 20 : 2242-2250 [U.S. transl., 2329-2337]).—
 $\text{CMe}_3\text{CH}_2\text{CHMe}_2$ is passed over a catalyst of $\text{MoO}_3\text{-Al}_2\text{O}_3$ (2% Mo) at 490-550° and affords *o*- and *p*-xylene (~9-10%), PhMe (~2%), *m*-xylene (trace), $\text{CH}_2(\text{CHMe}_2)_2$, and corresponding alkenes, gaseous hydrocarbons, and H_2 . These products are not consistent with previously described mechanisms and it is suggested that the first effect is a splitting off of Me followed by reaction with Me at the surface of the catalyst. From reaction velocity at different temp. an overall activation energy of dehydrogenation of 26,400 g.-cal./mol. is deduced.

The catalyst, $\text{MoO}_3\text{-Al}_2\text{O}_3$ (2% Mo) (65 ml.), is contained in a quartz tube (14 mm. diameter) and is regenerated after use by passing air (3 hr.) and then H_2 (8 hr.) at 500°. The initial activity falls with the no. of regenerations. Except in experiments for activation energy, or with different rate of passage, a current of N_2 (200 ml./hr.) is passed to prevent carbonisation. As a control of the activity of the catalyst, *n*-heptane is passed over, affording, at 550° and vol. velocity of 0.3 (7 l./hr.), 50-3% and at 500° 74-76% product over 5 hr., containing 4% olefines. In 18 experiments with $\text{CMe}_3\text{CH}_2\text{CHMe}_2$ (I) the reaction is carried out at 550° and vol. velocity of ~0.3 (7 l./hr.) until the η_f^* of the product falls to 1.405-1.4-5 hr. with fresh, to 2.5 hr. with repeatedly regenerated, catalyst. The yield of 235 ml. is divided into two portions. The first portion, 100 ml. is fractionated (40 theoretical plates) giving fractions (a) b.p. 77.2-97.7 (7%), containing 50% olefines, and C_9H_{10} (detected by light scattering spectra after hydrogenation), (b) 97.7-99.7° (80%), (c) b.p. 99.7° (42%) (mainly I), (d) b.p. 99.7-110.5° (8%) (a transitional fraction), (e) b.p. 110.5-110.7° (2%) (which on passing through active SiO_2 gel gives a non-aromatic portion containing I and contains an aromatic portion giving $\text{C}_9\text{H}_9\text{Me}(\text{NO}_2)_2$), (f) b.p. 110.7-138.5° (3.9%) [which gives on nitration 1 : 4 : 2 : 3 : 5- $\text{C}_9\text{HMe}_2(\text{NO}_2)_2$ and oily products indicating nitrated *o*-xylene, but no nitration products of *m*-xylene, and on oxidation gives *o*-ano $\text{p-C}_9\text{H}_14(\text{CO}_2\text{H})_2$ only, but containing traces of *m*-xylene as this is detected in the scattered-light spectrum], and (g) a residue, b.p. 138.5-150°, from which picric acid affords the picrate of $\text{C}_9\text{H}_9\text{Me}$. The second portion (135 ml.) is distilled affording one fraction, b.p. 40-132° (89 g.), containing 5-4% olefines and absorbing 1-1 l. of H_2 on hydrogenation giving saturated products, from which removal of aromatics and distillation afford $(\text{CH}_2\text{CHMe}_2)_2$ and I; a fraction, b.p. 110-110.5°, and a residue are also obtained. The composition of the gas evolved in the catalytic treatment is H_2 57.3-60.1%, alkenes 28.0-33% and alkynes 5.7-6.4%. The variation in product with different vol. velocity is tabulated and it is shown that the surface of the catalyst is not saturated under these conditions. The velocity of reaction at different temp. is measured by the gas evolution after 3 min. and the results from the Arrhenius equation give an activation energy of dehydrogenation of 26,400 g.-cal./mol. E. J. H. BRETT

C 2

Mechanism of catalytic reactions of hydrocarbons on a vanadium catalyst. VI. Comparison of the behavior of 1-heptene and 3-heptene. A. F. Platc and G. A. Tarasova (Acad. Sci. U.S.S.R., Moscow). *Zhur. Obshchel Khim.* (J. Gen. Chem.) 20, 1092-1101 (pages incorrect in original) (1950).--Expts. were made in a flow system on 20 ml. of a V₂O₅ catalyst on Al₂O₃ (1:10), length of column 230 mm. in a tube of 11 mm. diam. Under the conditions of the expts., PhMe is not hydrogenated. Dehydrocyclization of 1-heptene (I) and of 3-heptene (II), measured by the evolution of gas, proceeds at a const. rate at a given temp. in the range 400-480°. Examples of data (temp., rate of flow in ml. (STP)/3 min., rate of evolution of gas in ml. (STP)/3 min., % unsatd. compds. reacted, % aromatics in catalyst) are: I, 400°, 0.75, 2.87, 5.0, 2.2; 451°, 0.52, 13.05, 14.0, 0.2; 480°, 0.61, 44.85, 27.1, 15.3; II, 400°, 0.62, 3.80, 11.3, - (not detd.); 400°, 0.66, 30.24, 27.1, - (not detd.). Plots of the log of the rate of evolution of gas against 1/T are straight lines, giving for the apparent activation energies *E* of the total dehydrocyclization 39.6 and 40.0 kcal./mole for I and II.

resp., i.e. practically the same value, and equal to the previously established *E* = 41.1 for C₇H₁₆. On the other hand, for the reaction of formation of PhMe, *E* for I is 33.6, as against 60.7 kcal./mole for the same reaction with C₇H₁₆. I produces more PhMe than II. At 480°, with C₇H₁₆, I produces more PhMe than II. At 480°, with C₇H₁₆, the yield was the same (88.9%) in each case, but, with I, the product had a higher refractive index; with I, the gas was C₆H₆, 4.2, H₂ 84.7, C₇H₁₆, 11.2%; with II, 5.8, 70.3, 18.8%; I gave 1.2% coke relative to the mass passed, II 0.84%. By the gas analysis, II undergoes splitting of the C=C bond to a higher degree than I; on the other hand, I is more prone to polymerization. By fractionation of the catalysts, II gave a smaller amt. of PhMe than I, and the amt. of unreacted olefin was higher by about 10%. In both cases, the middle heptene-heptane fractions consist (by Raman spectrum analysis) of a mixt. of I, II, and 2-heptene; consequently, along with aromatization, there occurs in both cases some amt. of isomerization with a shift of the double bond. But for this isomerization, the difference of the degree of aromatization would be more pronounced. The greater tendency of II to decompr. to lower hydrocarbons causes faster poisoning of the catalyst. N. Thom

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Hydrocarbons of the cyclopentane series with a double bond in the side chain. II. Vinylcyclopentane. A. F. Plate, R. N. Shafran, and M. I. Batuev (M. V. Lomonosov State Univ., Moscow). *J. Gen. Chem. U.S.S.R.* 20, 505-11 (1950) (Engl. translation). See C.A. 44, 7782x
R. M. S.

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CA

Hydrocarbons of the cyclopentane series with a double bond in the side chain. II. Vinylcyclopentane. A. I. Plate, R. N. Shafrazi, and M. I. Battuev. (Tomskosov State Univ., Moscow). *Zhur. Obshchey Khim.* (J. Gen. Chem.) 20, 472-8(1950), v. C.A. 39, 4504. 1-Cyclopentylmethanol, secured in 33% yield from CaH_2MgCl and AcH , bp 73.0°, d_4^{20} 0.9228, n_D^2 1.4560. The 2-isomer, obtained similarly from ethylene oxide in 27% yield, bp 94.6°, d_4^{20} 0.9190, n_D^2 1.4576. Treatment of each (10 parts) with 7 parts Ac_2O , followed by addition of 1 part of a mixt. of 60% Ac_2O and 10% H_3PO_4 (d. 1.7) with stirring 2 hrs. below 38°, gave the corresponding acetates, bp 76.9°, bp 170.8°, d_4^{20} 0.9108, n_D^2 1.4301 (81%), and bp 138.100°, bp 193.5°, d_4^{20} 0.9541, n_D^2 1.4390 (93.5%). Passage of these over glass wool at 5.0 ml./hr. at 500° gave 81% and 83.9%, resp. of hydrocarbon, which after distillation over Na , was shown to be identical in both cases. The vinylcyclopentane thus obtained, bp 98.2-8.5°, d_4^{20} 0.7796, n_D^2 1.4305. Hydrogenation over Pt-C gave *ethylcyclopentane*, bp 102.8-3.4°, d_4^{20} 0.7007, n_D^2 1.4191, while oxidation with KMnO_4 gave *cyclopentanecarboxylic acid*, bp 215.20°, d_4^{20} 1.0507, n_D^2 1.4545. The Raman spectrum of the vinyl deriv. gave among other lines the line at 1640 cm^{-1} for its C=C bond, which corresponds to that of monosubstituted ethylenes. G. M. Kosodupoff

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PLATE, A. F.

"Review of M. F. Shostakovskiy's Book 'Aleksey Yevgrafovich Favorskiy'", Zhur.
prik. Khim. 22, No. 7, 1949.

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c A

Life and scientific activity of V. V. Markovnikov.
A. F. Platov. *Voprosy Khim.* 18, 367-77 (1949).
Bibliography, with portrait. 18 references. N. Tchou

ASIA AREA METALLOGRICAL LITERATURE CLASSIFICATION

PLATE, A. F.

20057 PLATE, A. F. Laureat Stalinskoy Premii Akad. D. A. Kazanckiy (KKM).
Uspolchi KKM. 1949, vyp. 4, s. 462-3.

30: Letopis, No. 32, 1949.

~~REFUGGED~~

Plate, A. F.

Bazhulin, P. A., Ukholin, S. A., Bulanova, T. F., Koperina, A. V. CA: 44-1331/e

Plate, A. F. and Kazanskiy, B. A.

Izvest. Akad. Nauk SSSR, Otdel Khim. Nauk 1949, 481-6

Optical investigation of hydrocarbons. V. Raman spectra of some napthenes
and nonanes.

Phy. Inst. im. P. N. Lebedev and Inst. Org. Chem., Acad. Sci.

~~REFUGGED~~

Analytic aromatization of pentamethylbenzene. A. V. PETROV
Polymer Knauer, Institute of Organic Chemistry, Academy of Sciences of the
USSR, Moscow, 117334, U.S.S.R.
Catalysis by a TiO₂-Pt catalyst between 400 and 610° give
isobutene, isobutyl C₄H₉, and cyclohexane. The activation energies for the
isobutene formation, the activation energies for the formation of
isobutyl and cyclohexane, and the C₄H₉ were 23 and
47.6, and from methyl cyclohexane 18 and 47.6 cal./mole, respectively.
Formation of carbides decreased the ability of the catalyst for
isobutene formation, but did not affect the ability of isobutyl formation.
It is supposed that carbides are formed on the metal
and Pt on the TiO₂ of the catalyst. The formation of
isobutene is due to the carbides, while isobutyl formation requires
the more complex mechanism. Coke does not react
by converting them normally to doublets. In hydrogenation
of cyclohexene over a TiO₂-Pt catalyst at 400°, C₄H₉ and C₆H₆ (10%) were formed or isobutylene was indicated.
Dehydrogenation and coke formation rather than formation
of isobutene and isobutyl represent the intermediate
step. Burning of the catalyst in the reaction is ex-
othermic. *Approved by the University*

Andrew Dranicki

YEVENTOVA, M.S.; PLATE, A.P.

[Vladimir Vasil'evich Markovnikov, 1838-1904; a biographical account] Vladimir Vasil'evich Markovnikov, 1838-1904; biograficheski ocherk M.S.Yeventovo i A.P.Plate. Moskva, 1949. 54 p. (Zamechatel'nye uchenye Moskovskogo universiteta, 7) (MIRA 12:6)
(Markovnikov, Vladimir Vasil'evich, 1838-1904)

PLATE, A. F.

47T16

USSR/Chemistry - Grignard Reaction Mar 1948
Chemistry - Halides

"Grignard Reaction with Aliphatic and Alicyclic
Tertiary Halides," A. F. Plate, P. I. Zabozhenskaya,
Inst Org Chem, Acad Sci USSR, Moscow State U imeni
M. V. Lomonosov, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 8

States that one of the methods used for obtaining
hydrocarbons with quaternary atom of carbon is the
reaction between tertiary alkyl magnesium halide and
chlorine or bromine allyl, and describes use of this
reaction for the synthesis of certain cyclopentane
homologs. Submitted by Academician B. A. Kazanskiy,
26 Dec 1947.

47T16

USSR/Chemistry - Aromatization

Chemistry - Catalysts, Chromium

1 Mar 1948

"Aromatization of Diallyl on Chromium Catalysts," A.
F. Plate, M. I. Batuyev, Inst Org Chem, Acad Sci USSR,
14 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 7

Experiments made on the isomerization of diallyl into
dipropenyl over catalyst of $\text{Cr}_2\text{O}_3/\text{Al}_2\text{O}_3$ at 300 and
400°; Show that in these conditions benzene is
formed, the content of which is 6% in catalyst retained
at 300° and 11% at 400°. Show that application
of refractometric methods of analysis to determine
the dipropenyl in catalysts obtained in isomeriza-

47711

USSR/Chemistry - Aromatization (Contd)

1 Mar 1948

tion of diallyl on oxide catalysts that can cause
aromatization may lead to errors as result of benzene
content in the catalysts. Submitted by Academician
B. A. Kazanskiy, 6 Dec 1947.

47711

HILDE, A. F.

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Plate, A. F. Kataliticheskaya Aromatizatsiya Paro-
mowych Uglevodorodov (Catalytic Aromatization of
Paraffin Hydrocarbons). Moscow-Leningrad: Izdatel-
stvo Akad. Nauk S.S.R., 1948. R17. Reviewed in L'vov
Khim. 18, 262 (1949).

AMERICAN METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

KAZANSKIY, B. A., LIRN'YAN, A. I., and PLATE, A. F.

"The Mechanism of the Hydrogenation of Cyclopentane with Ring Ruptures in the
Presence of Plattnized Charcoal," Dok. AN, 57, No. 6, 1947

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATE, A. F.

Lazansky, B. A., Liberman, A. L., Plate, A. F., Rosenblatt, M. I. - *ibid* 1947, 27, 1510,
G. A. - Synthesis and physical Properties of some 1-Alkenes" (p. 1510)
SO: Journal of General Chemistry, (Zhurnal Osnovnoi Khimii), 1947, Vol. 17, No. 2

CA

Synthesis of some derivatives of bicyclo[2.2.1]heptane
 A. F. Plate and T. A. Mertovich. *Bull. acad. sov. U.R.S.S., Classe sci. chim.*, 1947, 219-24 (in Russian).
Cyclopentadiene, b.p. 40-1°, n_D²⁰ 1.4461, (50.7 g.) and
BuOCH₂CH₃, b.p. 93-3.5°, d₄²⁰ 0.7801, n_D²⁰ 1.4036,
 were heated in an Ipatiev bomb for 15 hrs. at 200°,
 giving 10% *2-butoxybicyclo[2.2.1]heptane*, b.p. 97.8°,
 b.p. 204-5°, d₄²⁰ 0.9247, n_D²⁰ 1.4002; the sepn. from di-
 butyl acetal, which is formed to some extent, was done by
 boiling with 5% H₂SO₄, followed by steam distn. Varying
 amounts of polymers of cyclopentadiene were also formed.
 A lower reaction temp. or shorter duration gave lower
 yields. Hydrogenation of the product in EtOH over Pt
 black gave 93% *2-butoxybicyclo[2.2.1]heptane*, b.p. 50-60°,
 d₄²⁰ 0.9008, n_D²⁰ 1.4585. From equimol. ams. of cyclo-
 pentadiene and MeCOCH₂CH₃ mixed with cooling and
 allowed to stand in a sealed tube (no time is mentioned,
 but apparently the reaction is rapid) was obtained 100%,
1-acetyl bicyclo[2.2.1]-5-heptene, b.p. 48-8.5°, d₄²⁰ 1.0103,
 n_D²⁰ 1.4841; semicarbazone m. 160-6.5°. Hydrogenation
 in EtOH over Pt black gave 91% *2-acetyl bicyclo[2.2.1]-*
heptane, b.p. 50-2°, d₄²⁰ 0.9814, n_D²⁰ 1.4841; semicarbazone
 m. 150.5-7°.
 G. M. Kosolapoff

ASIN-SEA METALLURGICAL LITERATURE CLASSIFICATION
 581005 MFT ONLY USE

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C A

Analysis of organic substances according to class and
functional groups. A. F. Plate. *Turdy Komissii Anal.*
Khim. I., 133 07(1947). Chem. and phys. (distr. and
thermolifusion) methods of analysis are reviewed 25
references. M. Hirsch

1957

ca

Simultaneous transformation of cyclopentene into cyclopentane and cyclopentadiene in the presence of catalysts. A. V. Plate and M. I. Batiev. *J. Gen. Chem. (USSR)* 16, 805-10 (1946). Cyclopentene was passed over a $\text{Cr}_2\text{O}_3\text{-Al}_2\text{O}_3$ catalyst at 450° and 500° at a space velocity of 0.6-0.7 and was also heated in the presence of Pd black in a sealed tube at 180-200°. In both cases the reaction mixt. was found to contain cyclopentane and cyclopentene (both present in amounts of about 1.5%), which were detected by spectroscopic methods. The possibility of differentiation between the irreversible catalysis of cyclopentene and disproportionation of H in respect to reaction rates is discussed from thermodynamic considerations.

G. M. Kosolapoff

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Inst. Organic Chem., Acad. Sci. USSR

ASIA-METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION

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02

Synthesis of 1-methyl-1-ethyliclopentane. A. F. Slobodcikov and P. I. Zabrechenskaya. Izvest. Akad. Nauk SSSR, Otdel. Khim. Nauk 1946, 651-4. MeMgI plate and EtMgBr in 150 ml. Bu₂O treated over 1.3 hrs. from 0.1 g. Mg) in 150 ml. Bu₂O treated over 1.3 hrs. with 28 g. 1-chloro-1-ethyliclopentane, bp 52°, d₄²⁰ 0.9540, n_D²⁰ 1.4514, in 180 ml. Bu₂O, heated 2 hrs. to 45-55°, and let stand overnight gave 21.5% 1-methyl-1-ethyliclopentane, bp 117.5-20°, n_D²⁰ 1.4270. The reaction failed in Et₂O-CaH₂ soln. Repetition of the 1st expt. using 1-chloro-1-methylcyclopentane, bp 35°, d₄²⁰ 0.9630, n_D²⁰ 1.4450, and EtMgBr gave after 5 hrs. at 55-60° 10% of the desired product. After washing with H₂SO₄ and distro over Na it, bp 120-20.5°, d₄²⁰ 0.7806, n_D²⁰ 1.4272, melting point 40.2°. G. M. Kosolapoff

Inst. of Organic Chemistry, Acad. Sci. USSR and the Moscow State University.

AMSLA METALLURGICAL LITERATURE CLASSIFICATION

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SEARCHED

INDEXED

Ca

Mechanism of catalytic transformations of hydrocarbons on a vanadium catalyst. V. Simultaneous hydrogenation and dehydrogenation of cyclic olefins (cyclodane and cyclopentene). A. B. Plate (Inst. Org. Chem., Acad. Sci. U.S.S.R.). J. Gen. Chem. U.S.S.R.) 15, 150-64 (1945) (English summary) — The behavior of cyclohexene over $V_2O_5-Al_2O_3$ catalyst shows a very complex set of reactions; at 400-500°, as a result of hydrogenation, dehydrogenation, H disproportionation, and isomerization of the 6-membered into a 5-membered ring there are formed cyclohexane, benzene, methylcyclopentene, and methylcyclopentane. Cyclopentene at 450° over this catalyst forms cyclopentane and cyclopentadiene and a small amt. of naphthalene. It was shown that irreversible catalysis is characteristic not only of the 6-membered unsat. rings, but occurs also in 5-membered cycloolefins.

G. M. Kozolapoff

Mr., Inst. Organic Chemistry, Acad. Sci. SSSR

ASA-ISA METALLURICAL LITERATURE CLASSIFICATION

182080 HIT ONLY ONE

SEARCHED INDEXED

MAILED 11/12/67

FILED 11/12/67

RECORDED 11/12/67

SEARCHED INDEXED

MAILED 11/12/67

FILED 11/12/67

RECORDED 11/12/67

2159. MECHANISM OF CONTACT TRANSFORMATION OF HYDROCARBONS OF VANADIUM CATALYST. IV. DEHYDROGENATION OF SIX-MEMBER RINGS. Plate, A. F. and Tarasova, G. A. (J. Gen. Chem., U.S.S.R., 1945, 15, 120-30). Cyclohexane and methylcyclohexane were dehydrogenated by the method previously described. The main products of reaction were C_6H_6 and cyclohexene. Apparent activation energy for the reaction of cyclohexane is 39,800, and for methylcyclohexane 34,700 cal./mol. No formation of CH_4 or tar was observed in either case. The same reaction occurred in the presence of Cr_2O_3 catalyst.

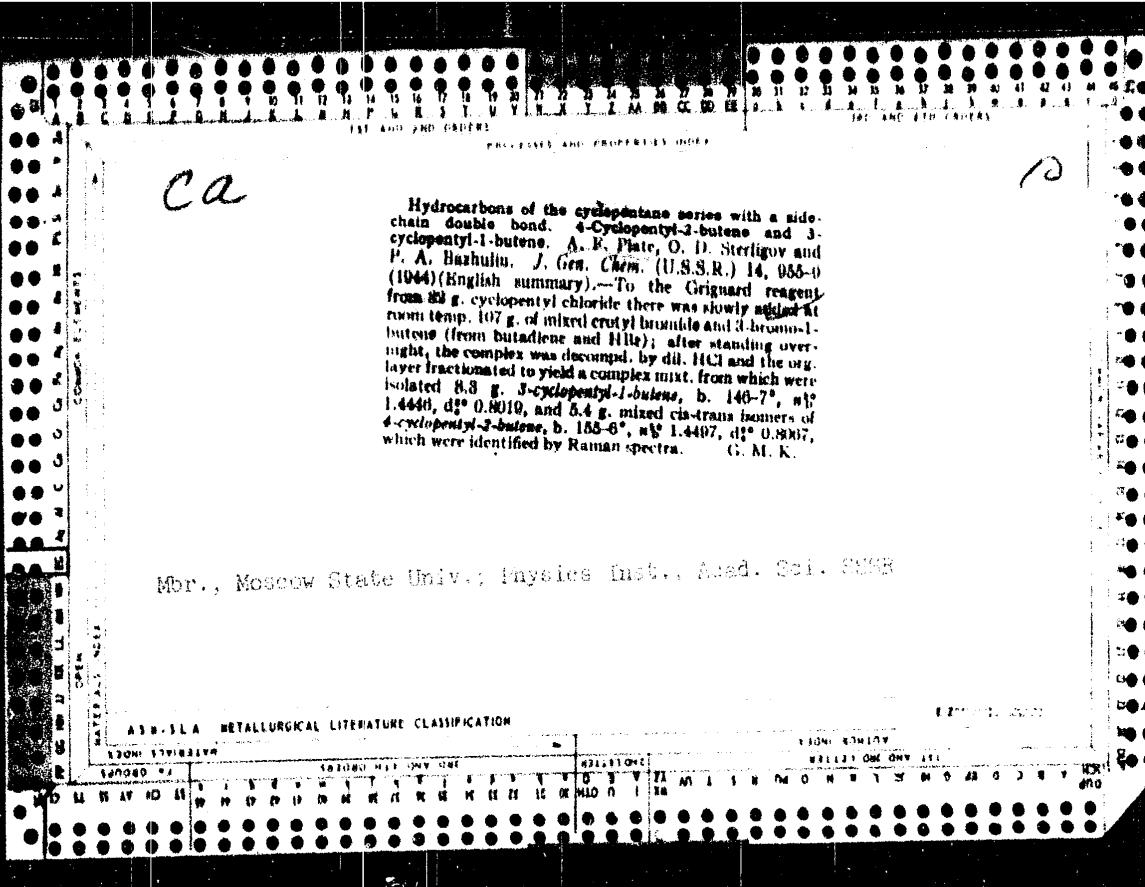
C. A.

Preparation of β -cymene from sulfate turpentine. A. I. Plate and G. A. Tarasova (Acad. Sci. U.S.S.R., Moscow). *J. Applied Chem. (U.S.S.R.)* 17, 576-581 (1944) (English summary). The transformations of sulfate turpentine at 380-520° in contact with catalysts (Cr oxide on Al_2O_3 1:3, Mo oxide on Al_2O_3 1:3), and synthetic Houdry aluminosilicate catalysts were studied. The first 2 catalysts give up to 60% cymene at 400° (calcd. on total turpentine) or 77% (calcd. on pinene-carene content). The aluminosilicate is not suitable, as it leads to formation of lower aromatic compd. G. M. Kosolatoff

Ca

Hydrocarbons of the cyclopentane series with a side-chain double bond. 4-Cyclopentyl-1-butene and 3-cyclopentyl-1-butene. A. K. Plate, O. D. Sterligov and P. A. Bushulin. *J. Gen. Chem. (U.S.S.R.)* 14, 933-9 (1944) (English summary).—To the Grignard reagent from 20 g. cyclopentyl chloride there was slowly added at room temp. 107 g. of mixed crotyl bromide and 3-bromo-1-butene (from butadiene and HBr); after standing overnight, the complex was decomposed by dil. HCl and the org. layer fractionated to yield a complex mixt. from which were isolated 8.8 g. 3-cyclopentyl-1-butene, b. 140-7°, n_D²⁰ 1.4446, d₄₀²⁰ 0.8010, and 5.4 g. mixed cis-trans isomers of 4-cyclopentyl-1-butene, b. 188-8°, n_D²⁰ 1.4407, d₄₀²⁰ 0.8007, which were identified by Raman spectra. G. M. K.

Mbr., Moscow State Univ.; Physics Inst., Acad. Sci. USSR



CP

Mechanism of contact transformations of hydrocarbons on V catalyst. III. Contact transformations of ethylcyclopentane. A. P. Plate and O. D. Sterligov. *J. Gen. Chem. (U. S. S. R.)* 13, 302-12 (1943) (English summary); cf. *C. A.* 38, 161. Dehydrogenation of ethylcyclopentane on V catalyst was studied between 440 and 500°. Reactions that occur involve aromatization, dehydrogenation to olefins and decomprn. to C and H. Apparent activation energy of the summary reaction is 31,500 cal./mole for fresh catalyst and 34,000 for regenerated catalyst. At 500° the 3 reactions form a ratio 2:2:1. In contrast to n-heptane (loc. cit.) ethylcyclopentane suffers greater decomprn. to C and H, which leads to easier poisoning of the catalyst. G. M. Kosolapoff

Acad. Sci. SSSR, Inst. Org. Chem., Moscow State U., Lab. Iac.
N. D. Zelin

AMERICAN METALLURGICAL LITERATURE CLASSIFICATION	
100-199	200-299
300-399	400-499
500-599	600-699
700-799	800-899
900-999	

PLATE, A. F.

"Mechanism of contact transformations of Hydrocarbons on vanadium catalyst. III. Kinetics
of the reaction of the cyclization of N-Heptane", Plate, A. F., and Tarassova, G. A.
(p. 11)

SO: Journal of General Chemistry (Zhurnal Osnovy Khimii) 1943, Volume 13, no. 1-2.

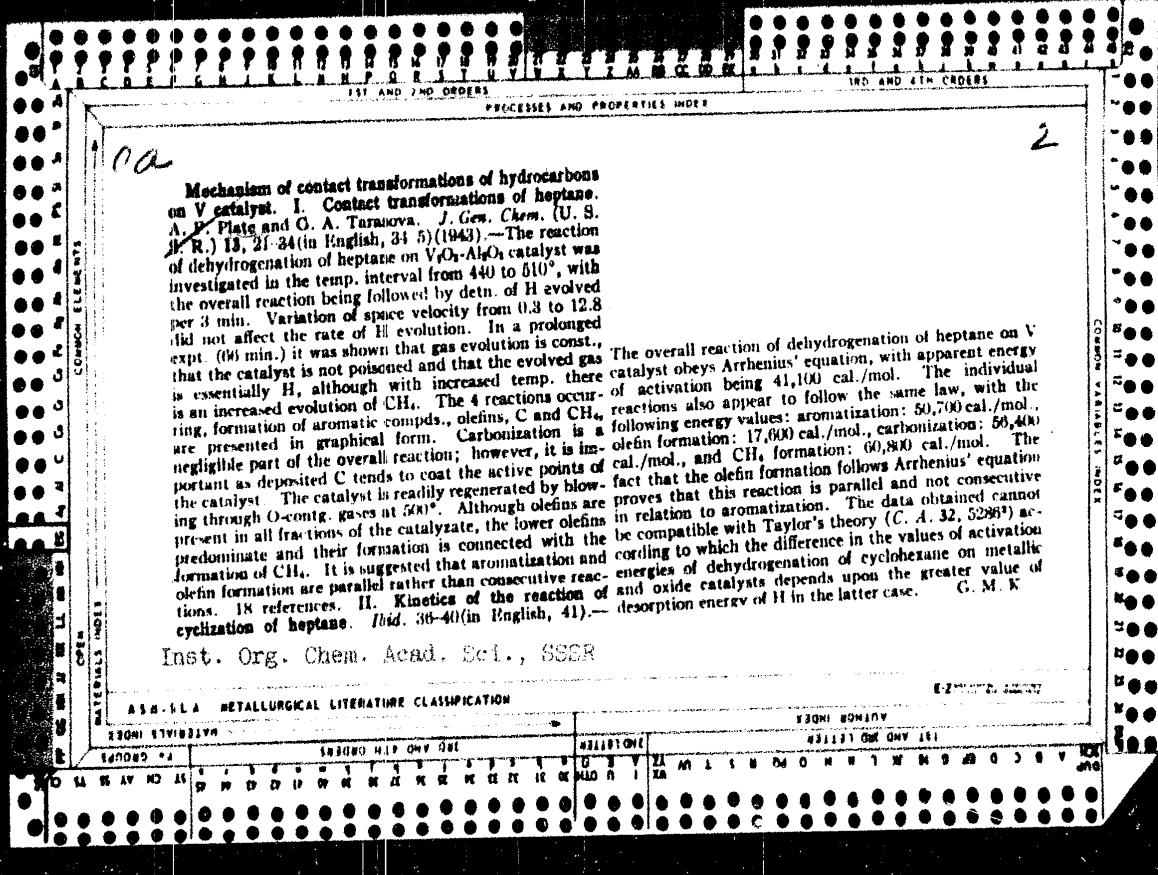
Inst. Org. Chem. Acad. Sci., SCCR

PA

Mechanism of contact transformations of hydrocarbons on V catalyst. I. Contact transformations of heptane. A. V. Platov and O. A. Tarnova. *J. Gen. Chem. (U. S. S. R.)* 13, 21-34 (in English, 31, 5) (1943).—The reaction of dehydrogenation of heptane on $V_2O_5-Al_2O_3$ catalyst was investigated in the temp. interval from 440 to 510°, with the overall reaction being followed by detn. of H evolved per 3 min. Variation of space velocity from 0.3 to 12.8 did not affect the rate of H evolution. In a prolonged expt. (96 min.) it was shown that gas evolution is const., that the catalyst is not poisoned and that the evolved gas is essentially H, although with increased temp. there is an increased evolution of CH_4 . The 4 reactions occurring, formation of aromatic compds., olefins, C and CH_4 , are presented in graphical form. Carbonylation is a negligible part of the overall reaction; however, it is important as deposited C tends to coat the active points of the catalyst. The catalyst is readily regenerated by blowing through O-contg. gases at 500°. Although olefins are present in all fractions of the catalyst, the lower olefins predominate and their formation is connected with the formation of CH_4 . It is suggested that aromatization and olefin formation are parallel rather than consecutive reactions. 18 references. II. Kinetics of the reaction of cyclization of heptane. *Ibid.* 36-40 (in English, 41).—

The overall reaction of dehydrogenation of heptane on V catalyst obeys Arrhenius' equation, with apparent energy of activation being 41,100 cal./mol. The individual reactions also appear to follow the same law, with the following energy values: aromatization: 50,700 cal./mol., olefin formation: 17,600 cal./mol., carbonization: 50,400 cal./mol., and CH_4 formation: 60,800 cal./mol. The fact that the olefin formation follows Arrhenius' equation proves that this reaction is parallel and not consecutive in relation to aromatization. The data obtained cannot be compatible with Taylor's theory (*C. A.* 32, 5289^b) according to which the difference in the values of activation energies of dehydrogenation of cyclohexane on metallic and oxide catalysts depends upon the greater value of desorption energy of H in the latter case. G. M. K.

Inst. Org. Chem. Acad. Sci., SSSR



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

Methods for the preparation of toluene. A. F. Plate.
Izv. Akad. Nauk SSSR, Ser. Khim., 12, 180-208(1943). Review. "Toluene is obtained from coal tar, petroleum, cracking mixts., products of pyrolysis with or without catalysts, hydrogenation of coal or shale oil, by transformation (gradiation, degradation, or reduction) of other aromatic hydrocarbons, by dehydrogenation and transformation of cycloparaffins. 138 references." E. H. Rathmann.

PLATE, A. F.

"The relative Efficiencies of Laboratory fractionating Columns of various Construction."
Kasansky, B. A., Liberman, A. L., Sergienko, S. R., Tarussova, G. A., and Plate, A. F.
(p. 122)

SC: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1942, Vol 12, No 1-2.

~~RECORDED~~

Plate, A. F.

Bazhulin, P. A., Plate, A. F., Solovova, O. P. and Kazanskiy, B. A. CA: 37-5315/2
(Lebedev Physical Inst., Acad. Sci., USSR, Moscow)
Bull. acad. sci. URSS, Classe sci. chim. 1941, 13-26
Optical methods for studying hydrocarbons. II. The combined scattering spectra
of paraffins.

Also: Iz. Ak. Nauk SSSR, Otdel. Khim. Nauk, No. 1, 1941.

~~RECORDED~~

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATE, A. F.

"Formation of Azeotropic Mixture of Olefins with Primary Alcohols in the
Synthesis of Olefins by the Organo-magnesium Method," Iz. Ak. Nauk SSSR, Otdel. Khim.
Nauk, No. 1, 1941.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATE, A. F.

"Catalytic Transformations of n-hexylcyclo-pentane," Iz. Ak. Nauk SSSR, Otdel.
Khim. Nauk, No. 1, 1941.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATE, A. F.

"Contact Cyclization of Paraffinic Hydrocarbons. Catalytic Action of Chromic Oxide," Dok. AN 27, No. 5, 1940.

ca

Inst. Org. Chem.
N. D. Zelinsky, Dept.
Acad. Sci.

Contact cyclization of paraffinic hydrocarbons. Catalysts containing vanadium pentoxide and thorium dioxide. B. A. Kazanski, A. F. Platé, T. P. Bulanova and N. D. Zelinskii. *Compt. rend. acad. sci. U. R. S. S.* 27, 658-63 (1940) (in English).—When a synthin fraction, b. 83-138°, was passed over V_2O_5 at approx. 500° or Al_2O_3 (primary heating to 800° in N₂) at 300° or Al_2O_3 at 450-555°, there was practically no formation of aromatic hydrocarbons. Alumina with 5-10% of V_2O_5 at 475-500° catalyzes the formation of aromatic hydrocarbons from synthin fractions which b. 83-138° and 162-205°, resp., but gradually loses its activity, becoming covered with C; the catalyst readily regains its original activity by heating in a current of air. Cr_2O_3 with 10% V_2O_5 at 450-470° showed considerable catalytic activity, but rapidly lost its activity. Parhy kieselguhr with 10% V_2O_5 did not catalyze the formation of aromatic hydrocarbons from a synthin fraction b. 83-138°. Alumina with 10% ThO_2 catalyzed the formation of aromatic hydrocarbons from the same synthin fraction. The catalytic activity of alumina with 10% ThO_2 at 500° for the formation of aromatic hydrocarbons from the same synthin fraction increased slowly and then slowly decreased; the catalyst can be regenerated by heating with air. Alumina with 10% V_2O_5 and 2% ThO_2 at 475-500° acted in the same manner as alumina with 10% V_2O_5 . Activated charcoal with 10% ThO_2 at 450-470° catalyzed considerably the formation of aromatic hydrocarbons from the synthin fraction, but the catalyst declined somewhat rapidly in activity and was not satisfactorily regenerated with air.

George Avers

ASB-1A METALLURGICAL LITERATURE												ASB-1B METALLURGICAL LITERATURE											
TECHNIQUE						PROCESSING MET. ORE						MANUFACTURE						TECHNIQUE					
SINTERING		ROASTING		FLUID BED		WET		DRY		REFINING		WET		DRY		REFINING		WET		DRY		REFINING	
D	M	B	A	T	R	I	S	E	N	G	H	U	R	T	E	N	G	H	U	R	T	E	N
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PROCESSES AND PROPERTIES INDEX

Ca

19

Catalytic aromatization of the paraffin hydrocarbons
A. F. Plate. *Uspeshki Khim.* 9, 1301-32 (1940). Review covering the aromatization of various satd. and unsatd. open-chain hydrocarbons by catalysts such as glass, SiO_2 gel, ZnO , TiO_2 , MoO_3 , MoS_2 , Al_2O_3 , MgO and Cr_2O_3 . A list of American, Italian, English, French, Dutch and Canadian patents is given. The work of Kazanskii and Zelinskii is discussed.

F. H. Rathmann

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

2401-574-3544

SEARCHED

SEARCHED WITH ONLY ONE

SEARCHED

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INDEXED

FILED

FILED

PROCESSES AND PROPERTIES INDEX

CA

Synthesis of some monosubstituted homologs of cyclopentane having a normal side chain. A. F. Platé. *Compt rend. acad. sci. U. R. S. S.* 24, 257-62 (1930) (in English). The following 1-alkylcyclopentanols were prepd. from cyclopentanone and the appropriate alkyl-MgBr: Am, bp 85.7°, n_D^{20} 1.4530, d_4^{20} 0.8957, yield 42.5%; hexyl, bp 85.6°, n_D^{20} 1.4600, d_4^{20} 0.8921, yield 21.50%; heptyl, bp 91.2°, n_D^{20} 1.4694, d_4^{20} 0.8817. Dehydration of these alcohols with 20% aq. $H_3C_6O_4$ or I (latter case) gave the following 1-alkylcyclopentenes: Am, bp 177.9°, n_D^{20} 1.4513, d_4^{20} 0.8128 (also given as 0.8108), yield 70-80%; hexyl, bp 202-4.5°, n_D^{20} 1.4540, d_4^{20} 0.8158, yield 72% (dodecane probably accompanied this compd., thus explaining lower n and d. values of Zelinskii, Mikhlin and Eventova (*C. A.* 27, 5725)); heptyl, bp 218-20°, n_D^{20} 1.4555, d_4^{20} 0.8176. Reduction of these olefins with Pd black gave the following 3-alkylcyclopentanes: Am, bp 178.0°, n_D^{20} 1.4356, d_4^{20} 0.7898; hexyl, bp 201.1-2.2°, n_D^{20} 1.4304, d_4^{20} 0.7957; heptyl, bp 222.1-4.0°, n_D^{20} 1.4430, d_4^{20} 0.8002. Cyclopentenyl chloride (85% yield from addn. of HCl to cyclopentadiene) and alkyl-MgBr react readily, giving the following 3-alkylcyclopentenes: Am, bp 173.5-5.2°, n_D^{20} 1.4465, d_4^{20} 0.8022, yield 43%; hexyl, bp 190.8-8.8°, n_D^{20} 1.4480, d_4^{20} 0.8007, yield 38%. Hydrogenation of these latter compds. gave the following alkylcyclopentanes (see above): Am, bp 178.4-9.0°, n_D^{20} 1.4359, d_4^{20} 0.7893; hexyl, bp 200.8-2.0°, n_D^{20} 1.4392, d_4^{20} 0.7956. G. A.

Dept. of N. D. Zelinsky, Mrz. of the Academy; Inst. Org. Chem.; MPR, All

ASW-LSA METALLURGICAL LITERATURE CLASSIFICATION

ECONOMIC

SCIENCE

10

Catalytic cyclization of 2,6-dimethyloctane in the presence of platinized charcoal. B. A. Karavskii, A. F. Plate, and B. E. Gol'dman. *Compt. rend. Acad. sci. U.R.S.S.* 23, 250 (1939) (in English). 2,6-Dimethyloctane, prepd. (1) by hydrogenation of allooctene over Ni-asbestos at 170°, yielding a product b.p. 150-60°, n_D²⁰ 1.4139, d₄²⁰ 0.7280, and (2) by distn. of citral hydrazone with KOH and platinized charcoal, was distd. twice through a glass tube at 305-310° in the presence of platinized charcoal, resulting in partial conversion (10% of the product was sol. in fuming H₂SO₄) into *p*-cymene (proved by conversion into Ba *p*-cymenesulfonate).

George Ayers

Zelinsky Laboratory of Organic Chem. State Univ. of Moscow

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

EXONI SYSTEM

SEARCHED

INDEXED

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FILED

The catalytic cyclization of paraffin hydrocarbons over platinumized charcoal. B. A. Kazanski and A. P. Plate. *J. Gen. Chem. (U. S. S. R.)* 9, 493-502 (1939). When the compds. are passed over platinum C at 300-40°, hexane forms 1.7% C₆H₆, 2-methylhexane gives 8.4% MePh, 3-methylheptane gives 3.5% of a mixt. of EtPh and *n*-Ph, *p*-xylenes, 4-methylheptane gives 4% *m*-xylene, and 4-methyloctane gives 3.0% of aromatic compds., consisting in part of PrPh and *m*-MeC₆H₄Et. Thus, the greater the branching of chains and the higher the mol wt., the greater the amt. of aromatic compds. formed. When diisooctyl is passed over Ni deposited on Al₂O₃ at temps. rising from 300-50°, the amt. of aromatic compds. formed rises from 2.5 to 25%. H. M. Leicester

ASIN-SLA METALLURGICAL LITERATURE CLASSIFICATION

A-1
BC

Aromatisation of certain homologues of cyclopentane and of paraffins in presence of platinised charcoal. B. A. KAZANSKI and A. F. PLATE (J. Gen. Chem. Russ., 1937, 7, 328—334).—The following products are obtained by passing the hydrocarbons over Pt-C at 310—315°; *o*-methyloctane and *o*-C₈H₇MeEt from *n*-butylcyclopentane; *p*-xylene from Bu²; PhEt and *o*-xylene from *n*-octane; *m*-C₈H₇MeP^t from diisoamyl.

AB-5A METALLURGICAL LITERATURE CLASSIFICATION

VOLUME ESTIMATE

951000 MAP ONLY ONE

SEARCHED

411107

INDEXED

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VOLUME ESTIMATE

411107 MAP ONLY ONE

SEARCHED

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INDEXED

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FILED

411107

PLATE, A. F.

"Synthese de quelques homologues monosubstitués du cyclopentane à chaîne latérale bifurquée". Kasansky, B. A., Plate, A. F. et Gnatenko, K. M. (p. 1593)

SO: Journal of General Chemistry (Zhurnal Obshchey Khimii) 1936, Vol. 6, No. 11

Composition of the liquid residue left from distillation of bivinyl, obtained by pyrolysis of petroleum by Prof. B. V. Bulov's method. B. A. Karanski, A. F. Plate and S. S. Artyunyan. Sintet. Kachek 1953, No. 3, 13-18. Gases leaving the retort in which pyrolysis of kerosene was taking place were freed from tarry substances and subjected to 3-stage compression and cooling. The liquid condensates of this process were collected and run into a bivinyl still. The liquid left in this still after distillation contained: cyclohexene (fraction 30.52%), 3, benzene 6%, toluene about 9 and cyclopentadiene 12%. Distill. losses, oxidation products and undetd. substances amounted to 21%. The first fraction was the smallest and had the most complex compn., contg. piperylene and possibly isoprene. Other fractions were less complex, contg. about 80% of one substance which was easily purified, yielding, in percentage of the total bivinyl-still residue, benzene 9, toluene 1.5, cyclopentadiene 2.0. The residue left in the bivinyl still was 16-17% of the total kerosene taken for pyrolysis.

James Sotrel

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATE, A.F.

Review of Al. A. Petrov's book "Catalytic isomerization of
hydrocarbons". Neftekhimia 1 no.3:444-445 My-Je '61.
(MIRA 16:11)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

ALEKSANYAN, V.T.; STERIN, Kh.Ye.; MEL'NIKOV, A.A.; PLATE, A.F.

Raman spectra of stereoisomers of 1,2-dialkylcyclopentanes.
Opt. i spektr. 8 no.3:324-327 Mr '60.
(Cyclopentane-Spectra) (MIRA 1/;5)

ALEKSANYAN, V.T.; BARINOVA, Z.B.; ZHIZHIN, G.N.; STERIN, Kh.Ye.;
BELIKOVA, N.A.; PLATE, A.E.

Vibrational spectra of some endo- and exoderivatives of the
series bicyclo(2,2,1)heptane and bicyclo(2,2,1)-2-heptene.
Zhur.strukt.khim. 4 no.1:28-36 Ja-F '63. (MIRA 16:2)

I. Komissiya po spektroskopii AN SSSR i Moskovskiy gosudarstvennyy
universitet imeni M.M. Lomonosova.

(Bicycloheptane—Absorption spectra)
(Norbornene—Absorption spectra)

USSR/Physical Chemistry - Crystals.

B-5

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 263

gradient by a determined angle set in advance. The executed experiments of growing Zn monocrystals permit the author to assert that denser atom planes (the base plane in particular) arrange themselves parallelly to the direction of the temperature gradient at the crystallization and make an angle with the crystal axis (test tube axis). Monocrystals with set angles from 0° to 90° were grown. Test tubes of the set interior shape are necessary for the preparation of monocrystals of a set exterior shape (cylindrical, tetrahedral, hexahedral, with swelled specimen ends and others). The method of preparation of such test tubes is described.

Card 2/2

Platatsis, Ya.Ye.
USSR/Physical Chemistry - Crystals.

B-5

Abs Jour : Referat Zhur - Khimija, No 1, 1958, 263
Author : Ya.Ye. Platatsis.
Inst : Latvian University.
Title : Growing of Monocrystals of Metals with Set Orientation
and Exterior Shape.
Orig Pub : Zinatniskie raksti. Latv. univ., Uch. zapr. Latv. un-ta,
1956, 8, No 2, 151-153

Abstract : A method of growing metal monocrystals with a set orientation
and determined exterior shape for the study of the
mechanism of plastic deformation of metals is recommended.
The author describes the construction of a furnace, which
permits to obtain a vertically directed temperature gradient
within the limits of the whole furnace and to alter
the direction of crystal axis with reference to the

Card 1/2

PLATASH, I.T.

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Foods

(4) *their Brichew,*
~~The bound form of vitamin C in lemon juice.~~
~~Shamrai, I.T. Platash and G. V. Gorchakova (Med. Inst.~~
~~Stanislav). Voprosy Pitaniya 12, No. 4, 41-7 (1953).~~
Ascorbigen is the bound form of vitamin C (I). The forms of I in lemon juice (II) were studied by anode polarography and paper chromatography. Polarograms of II contg. 60-80 mg. % I and of a soln. of cryst. I were recorded. The curves were different. The height of the wave of the polarogram of II does not represent the content of I in II. After boiling II the height of the wave increases. On boiling II acidified with AcOH, a new wave representing the free I appears. Filter paper sprinkled with 2% AgNO₃ (prep'd. in a 2% AcOH) is treated with 1 drop of II and with 1 drop of I soln. Black spots appear in 5-10 sec. In the case of I soln. and in 8-10 min. in the case of II. I is qualitatively changed in II. The data indicate that citrin forms with I in neutral and alk. media a loose complex more stable to air than is free I. Leon Goldenberg

4-24-74
P.A.

USSR / Human and Animal Physiology. Excretion. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41532.

Author : Platash, I. T.; Yaroviyy, V. P.

Inst : Kherson Institute of Pediatry.

Title : Iodine Geochemistry and Its Correlation with
Endemic Goiter.

Orig Pub: Nauk. zap. Khersonsk. derzh. ped. in-t. 1955, vyp.
5, 167-174.

Abstract: No Abstract.

SOV/98-59-7-21/22

Conference on Scientific Research in the Field of Hydromechanics
Velikanov, corresponding member of the Academy of
Sciences of the USSR: "The Theoretical and Practi-
cal Value of the Gravitational Theory of Alluvia";
N.A. Sulin, Candidate of Technical Sciences: "Loss
of Pressure and Hydraulic Resistance in Large-Dia-
meter Tubes"; A.N. Klimentov, Candidate of Techni-
cal Sciences (VNIITS), N.P. Zrelov (VODGEO), and
S.A. Korzhayev (IGD of Academy of Sciences of the
USSR): "Experiments in Water Supply in Conduit Tu-
bes of Various Diameters"; V.S. Knoroz, Candidate
of Technical Sciences: "Resistance in Rough Open
Riverbeds."

ASSOCIATION: (Conference Organizing Committee) Orgkomitet po
provedeniyu soveshchaniya

SOV/98-59-7-21/22

Conference on Scientific Research in the Field of Hydromechanics
Engineer, V.A. Moroz (Planning and Design Office of
the Hydromechanization Trust of the Ministry of the
RSFSR): "New Designs of Bucket-Rotor Types of Disin-
tegration Equipment"; L.D. Borisenko, Candidate of
Technical Sciences (IGD of the Academy of Sciences
of the USSR), Engineer N. I. Kazakov (The Lead-Mi-
ning Trust), and M.Ye. Zhurzha, Candidate of Techni-
cal Sciences (DONUGI): "The Design of Feeders for
the Loading of Heavy Materials into Pressurized Wa-
ter Conduits"; The session on transport contained
papers read by the following: I.V. Yegiazarov,
member of the Academy of Sciences of the Armenian
SSR: "The Movement of Alluvia and Related Problems";
Prof. M.A. Dementyev, Doctor of Technical Sciences
(VNIIG imeni B.Ye. Vedeneyev), A.K. Ananyan, and B.G.
Sanoyan, Candidate of Technical Sciences (the Insti-
tute of Energetics of the Academy of Sciences of
the Armenian SSR): "The Kinematics of Turbulent
Streams"; Prof. F. I. Frankl', Doctor of Technical
Sciences (Kabardino-Balkar State University): "A
Method for Settling the Movement of Alluvia"; M.A.

Card 5/6

SCV/98-59-7-21/22

Conference on Scientific Research in the Field of Hydromechanics
of the Sary-Yazynsk dam on the Murgab River by Means
of Fine-Grained Sand"; I.Ya. Rusinov, Candidate of
Technical Sciences (A.F. Mozhaisky VVIA): "Research
into the Morphological Peculiarities of Sand Foun-
dations"; Engineer I.A. Shneyer (SAOGIDEP) and N.I.
Yakovlev (VNIIGIM): "Formulae for the Determination
of the Angle of Inclination of Earth Foundations";
N.V. Zolatarev, Candidate of Technical Sciences: "A
Method of Calculating the Thawing Rate of Frozen
Foundations on the Upper Slope of Sand Dams when Cons-
tructed in Winter"; D.I. Melamut, Candidate of Tech-
nical Sciences (VNIIGIM), and Engineer K.P. Kopiyevskiy
(GNTK of the Moldavian SSR): "Problems of Spanning
Rivers Without the Use of Bankets"; V.V. Dlougiy, Can-
didate of Technical Sciences (VNIIGS) and Engineer
M.I. Khrustalev Ferro-Concrete (VNII): "The Hydrou-
lic Fractionation of Natural Sand in the Preparation
of Concrete." At the session on equipment the fol-
lowing papers were read: Engineer B.M. Shkundin
(Gidroproyekt): "Special-purpose Earth Detonators";

SOV/98-59-7-21/22

Conference on Scientific Research in the Field of Hydromechanics
conference was divided into 3 sessions: on technology, equipment and transport. At the session dealing with technology papers were read by the following:
Prof. N.N. Maslov, Doctor of Technical Sciences: "Certain Problems in the Planning of Alluvial Dams"; P.L. Ivanov, Candidate of Technical Sciences (Institute of Mechanics of the Academy of Sciences of the USSR); "Peculiar Features of the Dilution and Compression of Sand Foundations"; P.D. Lobasov, Candidate of Technical Sciences (VNIIGS); "Piecemeal Alluvial Construction"; V.A. Melentyev, Candidate of Technical Sciences (B.E. Vedeneyev VNIIG) and V.P. Spiridin, Candidate of Technical Sciences (Institute of Mechanics of the Academy of Sciences of the USSR); "The Consolidation and Compression of the Foundations of the Key Parts of Earth Dams"; N.I. Kolpashnikov (GISI); "Research on Alluvial Construction by Means of Cohesive Foundations"; M.P. Kuzminov, Candidate of Technical Sciences: "The Hydraulic Construction of Earthworks by Means of Loess Foundations"; B.A. Volnin (V.V. Kuybyshev GISI); "The Alluvial Construction

Card 3/6

SCV/98-59-7-21/22

Conference on Scientific Research in the Field of Hydromechanics
Academies of Agricultural Science and the GNTK of
the union republics, and official scientific and
research institutes. The conference was opened by
Academician A.M. Terpigorev, and at the plenary
session papers were read by the following: Prof.
A.P.Yufin, Doctor of Technical Sciences: "The State
of Scientific Research Work in the Field of Hydro-
mechanization"; Engineer V.A. Platanov: "The Con-
struction of Alluvial Dams and the Work of Scienti-
fic Organizations"; Engineer N.A. Gorin: "The Pre-
sent State of and the Outlook for Design and Re-
search Work in the Field of Equipment for Hydrome-
chanization"; Engineer S.B. Fogel'son: "Certain
Problems of the Economy of the Hydromechanization
of Earth Works"; Prof. G.A. Nurok, Doctor of Tech-
nical Sciences: "The Present State of and the Out-
look for the Development of the Hydromechanization
of Opencast Coalmining"; Engineer B.M. Shkundin:
"Means of Perfecting Hydromechanization in the Non-
Metallic Mineral Industry." The remainder of the

PLA 1d N^o 0 A.
10(4)

AUTHOR:

TITLE:

PERIODICAL:

ABSTRACT:

Rozinor, S.T., Chairman
Conference on Scientific Research in the Field of
Hydromechanics

Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 7, pp
62-65 (USSR)

The article is a chronicle of the above-named conference, which was held in Moscow from April 15-17, 1959, on the initiative of the coordinating commission for hydromechanization in the Council for Hydraulic Affairs of the Academy of Sciences of the USSR. The All-Union MSES Hydromechanization Trust, the Mining Institute of the Academy of Sciences of the USSR and the Moscow oblast board of the Technological Department of the construction industry also participated in the organization of the conference, which was attended by more than 400 representatives of 149 organizations, including the Office of State Construction of the USSR, ministries, national economic councils, institutes of the Academy of Sciences of the USSR and the union republics, the ASIA of the USSR and the Ukrainian SSR, the

sov/98-59-7-21/22

Card 1/6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATANOV, N. V.

"Incidence of Malaria Among the Immigrants of Novosibirsk Oblast and the Organization of Antimalarial Measures", Med. Paraz. i Paraz. Bolez., Vol. 17, No. 1, pp 74-80, 1948.

Plataki, J.

RYLL-NARDZEWSKI, C.; PLATAKIS, J.; ZOLKIEWICZ, I. H.

Diagnosis of skin tuberculosis by provoking leukergy with
tuberculin. Polski tygod. lek. 6 nos.13-14:515-522 2 Apr
1951. (CLML 20:11)

1. Of the Dermatological Clinic (Director -- Prof. Czeslaw
Ryll-Nardzewski, M.D.) of Lublin Medical Academy.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATAGEA, Gh.

Origin and frequency of the winds in Rumania. Probleme geog 8:325-345
'61.

PLATAGEA, Gh.,; POPA, Gh.

Variation of the characteristics of the hydrographic network
between the rivers Ialomita and Trotus. Probleme geog 9:129-146
'62. (publ. '63)

MORARU, T.; CALINESCU, Maria; PLATAGEA, Gh.; POPA, Gh.; POSEA, Aurora

Contributions to the physiographic study of the Tirnava Mica
Valley. Probleme geog 9:157-178 '62. (publ. '63)

1. Membru corespondent al Academiei R.P.R. (for Moraru).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATAGEA, Gh.

"Variations and changes in the flowing of rivers." Reviewed by
Gh. Platagea. Probleme geog 9:359-360 '62. (publ. '63)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLATAGEA, Gh.; POPA, Gh.

Study of flood discharges of the watercourses between the
Ialomița and Trotus rivers. Meteorologia hidrol gosp 6 no.1:
13-21 '61.

L 31581-66 IJP(c)
ACC NR: AP6022994

SOURCE CODE: P0/0022/65/000/003/0085/0087

69
B

AUTHOR: Plata, Czeslaw (Master engineer)

ORG: none

TITLE: Attempt at d.c. power regulation by utilizing the Hall effect

SOURCE: Przeglad telekomunikacyjny, no. 3, 1965, 85-87

TOPIC TAGS: Hall effect, crystal, wattmeter, pulse modulation, electromotive force, direct current

ABSTRACT: The article reports on the application of domestically manufactured Hall devices to the regulation and stabilization of light D.C. power. First the characteristics of two so called halotrons are described; both these devices are built with a germanium crystal, but one has a permalloy core while the other has a ferrite cup core. The operation of these devices is based on their ability to deliver within a certain range a voltage (EMF) proportional to the product of two or more input voltages or currents. Such a device can thus be used also in a wattmeter. Next the basic schematic diagrams are shown for various methods of D.C. voltage, current or power regulation: by a series or parallel connected rheostat, by switch or by controlled rectifier. A more refined method is shown which includes a closed loop system with an amplifier and filter. Finally an experimental stabilization circuit is shown where the Hall voltage is amplified and a pulse-width modulation system is used for regulation. Orig. art. has: 14 figures. [JPRS]

SUB CODE: 09, 20 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 002

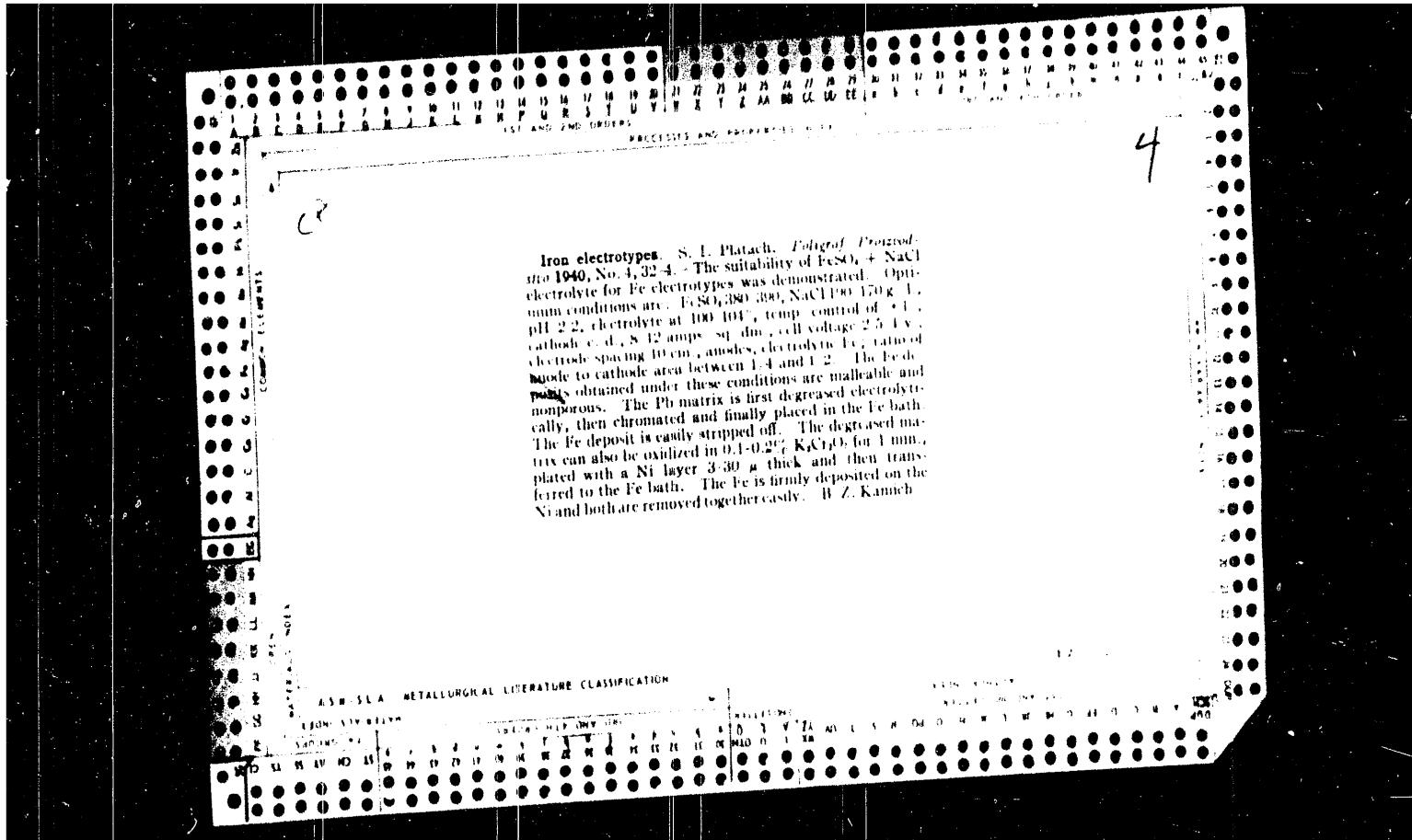
UND: 621-320

Card 1/1 JC

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A-2

Leukergic effect in syphilis. J. Malakoff Ann Univ Med Cracow
Skowronka, 1950, (D), 1-27. The proportion of white blood cells
undergoing clumping in Flock's leukergy test in various forms of
syphilis was : primary 5, secondary 14.5, symptomless 13.5, tertiary
12.5, and congenital 7.5%. The average erythrocyte sedimentation
rate (all cases) was 29.7; there is no correlation between this and
the leukergic effect. Inactivation of the latter occurs during
intensive treatment of syphilis by means of penicillin or Bi and As
derivatives. R. TRUSCOT.



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PLATA, Czeslaw, mgr inz.

Limit frequency measurement of power transistors. Przegl telekom
35 [i. e. 36] no.2:55-56 F '63.

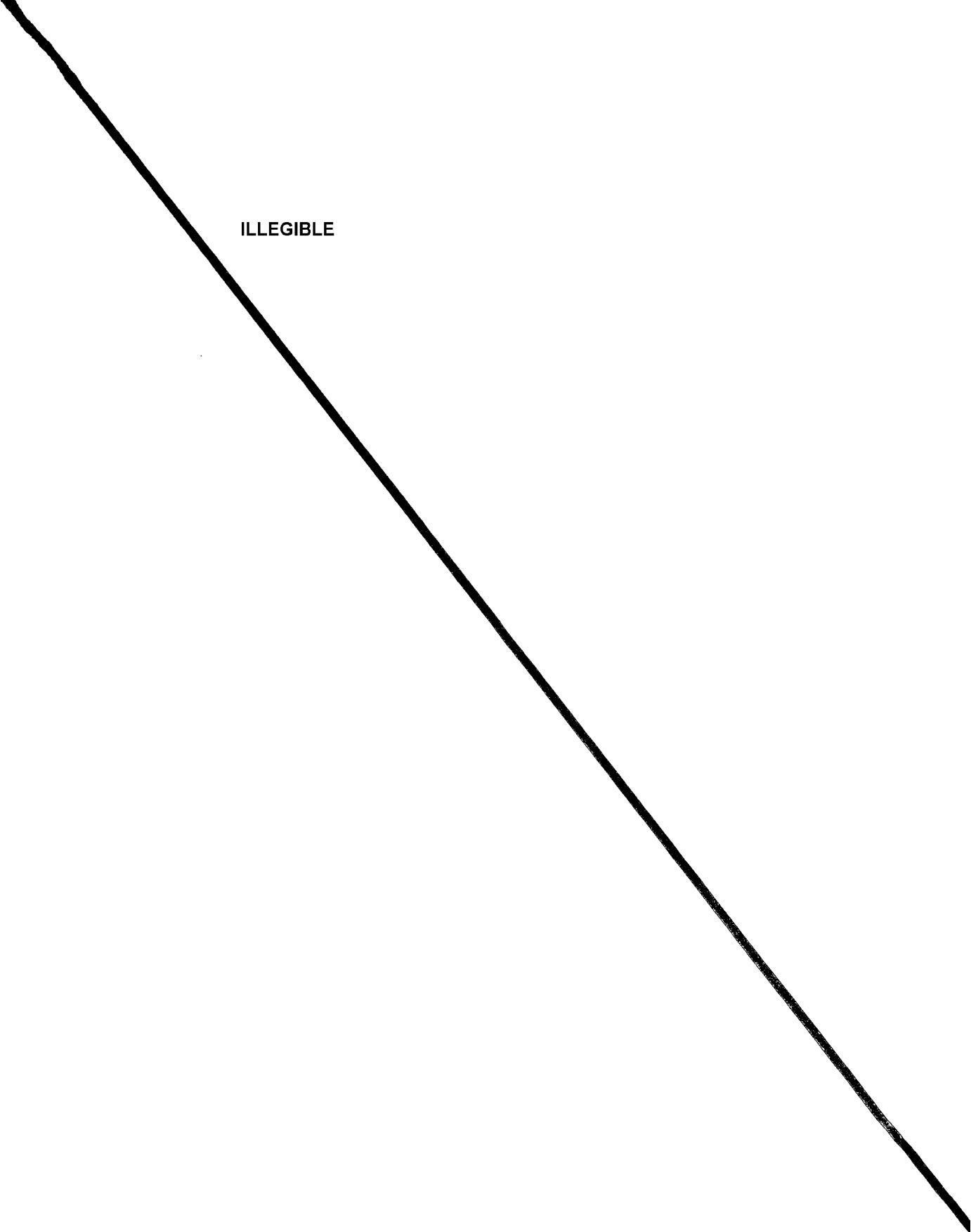
PLATA, Czeslaw

Application of the galvanomagnetic effect in electric power measurements. Przegl elektroniki 4 no.8:452-458 Ag '63.

1. Zaklad Teletransmisi Przewodowej, Politechnika, Gdansk.

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ILLEGIBLE



PLATA, Czeslaw

Continuous measuring of the thermal resistance of transistors.
Przegl elektroniki 5 no.11:582-588 N 164.

1. Division of Communication, Technical University, Gdansk.

PLATA, Czeslaw

PLATA, Czeslaw

PLAID

Department of Conductor Telecommunication, Gdansk Polytechnic Institute (Zaklad Telekomunikacji Przemyslowej; Politechnika Gdanska)

Warsaw, Przegląd elektroniki, No 6, August 67, subjekt.

"Galvanomagnetic effect Application to electric Power Measurements".

P.T.A

*Building Industry +
Architecture*

6-1-1-373
PROBLEMS IN A New Type of Reinforced Concrete Railway Bridge
SPOON

Note: Reinforced concrete railway bridge No. 6, built in 1931, has been proposed to be replaced by a new type of reinforced concrete bridge. The author has conducted traffic tests on the existing bridge and has found that it is safe for up to 1000 tons of axle load. The author has also conducted traffic tests on the new bridge and has found that it is safe for up to 1500 tons of axle load. The author has also conducted traffic tests on the new bridge and has found that it is safe for up to 1500 tons of axle load.

Conclusions:

BIBERGAL, S.; DABKOWSKI, J.; PLASZEWSKA, J.

Effect of histamine on cutaneous vasomotor reactions. Przegl.
derm., Warsz. 2 no.4:501-518 Oct-Dec 1952. (CLML 24:2)

1. Of the Hospital imienia E. Sonnenberg, M.D. (Head-Physician
---S. Bibergat), Lodz.

GRIGOR'YEV, P.Ya.; PLASTUNOV, V.M.

Course of hypertension at Kul'dur health resort. Vep.kur., fizioter.
i lech.fiz.kul't. 27 no.3:248-251 My-Je '62. (MIRA 15:9)

1. S kurorta Kul'dur (glavnyy vrach V.M.Plastunov).
(HYPERTENSION)
(KUL'DUR--HEALTH RESORTS, WATERING-PLACES, ETC.)

SOTNIKOV, Vladimir Fedotovich, podpolkovnik; PLASTUROV, Mikhail
Markelovich, podpolkovnik; MOROZOV, B.N., polkovnik, red.

[The commander assumes his office; advice to the young
commander of a company of battery] Komandir vstupaet v
dolzhnost'; novety molodomu komandiru roty i baterii.
Moskva, Voenizdat, 1965. 196 p. (Mira R:9)

PLASTUNOV, M.B., dots.

Indications and therapy for urolithiasis at the Truskavets health resort. Urologija 24 no.4:3-9 Jl-Ag '59. (MIRA 12:12)

1. Iz urologicheskoy kliniki (zav. - dots. M.B. Plastunov) L'vovskogo meditsinskogo instituta.

(URINARY CALCULI, therapy)
(MINERAL WATERS therapy)

SKIN FILE

EXCERPTA MEDICA Sec 9 Vol 13/4 Surgery Apr 59

2035. OPERATIVE TREATMENT OF EPISPADIAS (Russian text) - Plastunov

M. R. - UROL., 1957, 3 (30-36)

A modified Jung's operation is the most radical method of treatment of epispadias. The method is described. The author observed 7 patients with a total epispadias (1 female), who were treated by sphincteroplasty. In 5 of them a complete continence of urine was achieved. Jung's operation, in the absence of infection, is the best method for reconstruction of an epispadic urethra in adult males. In children only a sphinctero-plasty is necessary, and the urethra is formed in another stage of operation by means of a subcutaneous tunnelization. This method decreases the risk of formation of strictures.

(S)

M

PANOV, V.I.; PLASTUNOV, M.B.; FRAYFEL'D, E.L.

Vascular structure of the testis in tuberculosis. Urologia 24
no.5:24-26 S-O '59. (MIRA 12:12)

1. Iz kafedry anatomi (zav. - prof. A.P. Lyubomudrov) i urologicheskoy
kliniki (zav. - dots. M.B. Plastunov) L'vovskogo meditsinskogo instituta.
(TUBERCULOSIS MALE GENITAL pathol.)

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PLASTYNOV, M.B.

Teaching urology in medical institutes. Urologia 25 no.2(46)
49 Mr-Ap '60. (MIRA 13x12)
(UROLOGY--STUDY AND TEACHING)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200040-6

PLASTUNOV, M.B.

Current status of urological care in Lvov Province and prospects
for its further development. Urologija 25 no. 5-6 '61 5-6 '60.
(MIRA 14:1)
(LVOV PROVINCE--UROLOGY)

PLASTUNOV, M.B., dots. (Lvov).

Classification of tuberculosis of the urogenital organs. Urologia
23 no.6:18-20 N-D '58.
(TUBERCULOSIS, UROGENITAL
classif. (Rus))
(MIRA 11:12)

Plastunov, M. B.

LYUBOMUDROV, A.P. (L'vov, ul.Fizkul'turnaya, d.24), PAL'CHEVSKIY, Ye.I.
PANOV, V.I., PLASTUNOV, M.B., FRAYFEL'D, E.L.

Angioarchitectonics of the kidney following disease and its
clinical significance. Nov.khir.arkh. no.2:3-8 Mr-Ap '58 (MIKA 11:6)

1. Kafedra anatomi (zav. - prof. A.P. Lyubomudrov), kafedra patolo-
gicheskoy anatomi (zav. prof. Ye.I. Pal'chevskiy) i klinika urologii
(zav. - dots. M.B. Plastunov) L'vovskogo meditsinskogo instituta.
(KIDNEYS--BLOOD SUPPLY)

PLASTUNOV, M. B.
PLASTUNOV, M.B. dotsent (L'vov)

Treatment of extensive papillomatosis of the urethra. Urologia 22
no.4:65-66 J1-Ag '57. (MIR 10:10)

(URETHRA, neoplasms,
papillomatosis (Rus))
(PAPILLOMA, case reports,
urethra (Rus))

PLASTUNOV, M.B.

PLASTUNOV, M.B., dotsent

Surgical treatment of epispadias. Urologiia 22 no.3:30-36 My-Je '57.
(MIRA 10:8)

1. Iz urologicheskoy kliniki (zav. - dotsent M.B.Plastunov) L'vovskogo meditsinskogo instituta (dir. - prof. L.N.Kuzmenko)
(EPISPADIAS, surg.
technic)

PLASTUNOV, M.B., dotsent (Lvov)

Surgery of the urogenital system in the works of N.I.Pirogov; 75th
anniversary of the death of N.I.Pirogov. Urologia 22 no.2:3-5
Mr-Ap '57. (MLRA 10:7)

(UROGENITAL SYSTEM, surg.
contribution of N.I.Pirogov)

PLASTUNOV, M.B., dozent (L'vov); GIMPEL'SON, E.I.[deceased]

"Calculi of the kidneys and ureters" by E.I. Gimpel'son. Reviewed
by M.B. Plastunov. Urologiia, 22 no.1:78-79 Ja-F '57
(MIRA 10:5)

(CALCULI, URINARY)

PLASTUNOV, M.B., dotsent

Trauma of the bladder in connection with interruption of pregnancy.
Urologiia 21 no.1:26-29 Ja-Mr 1956. (MIRA 9:12)

1. Iz Urologicheskoy kliniki (zav. - dotsent M.B.Plastunov) L'vovskogo meditsinskogo instituta (dir. - prof. L.N.Kuzmenko)
(ABORTION, compl.
bladder inj.)
(BLADDER, wounds and inj.
caused by abortion)
(WOUNDS AND INJURIES
bladder, caused by abortion)

PLASTUNOV, M.B. (L'vov, ul. Lenina, d. 32, kv. 4)

A.L.Stukkei's nerve-block method for the bladder region. Vest.Khir.
75 no.3:109-111 Ap '55. (MLRA 8:7)

1. Iz urologicheskoy kliniki (zav. dots. M.B.Plastunov) L'vovskogo
meditsinskogo instituta.

(ANESTHESIA, REGIONAL,
nerve block in bladder region)

(BLADDER,
nerve block in bladder region)

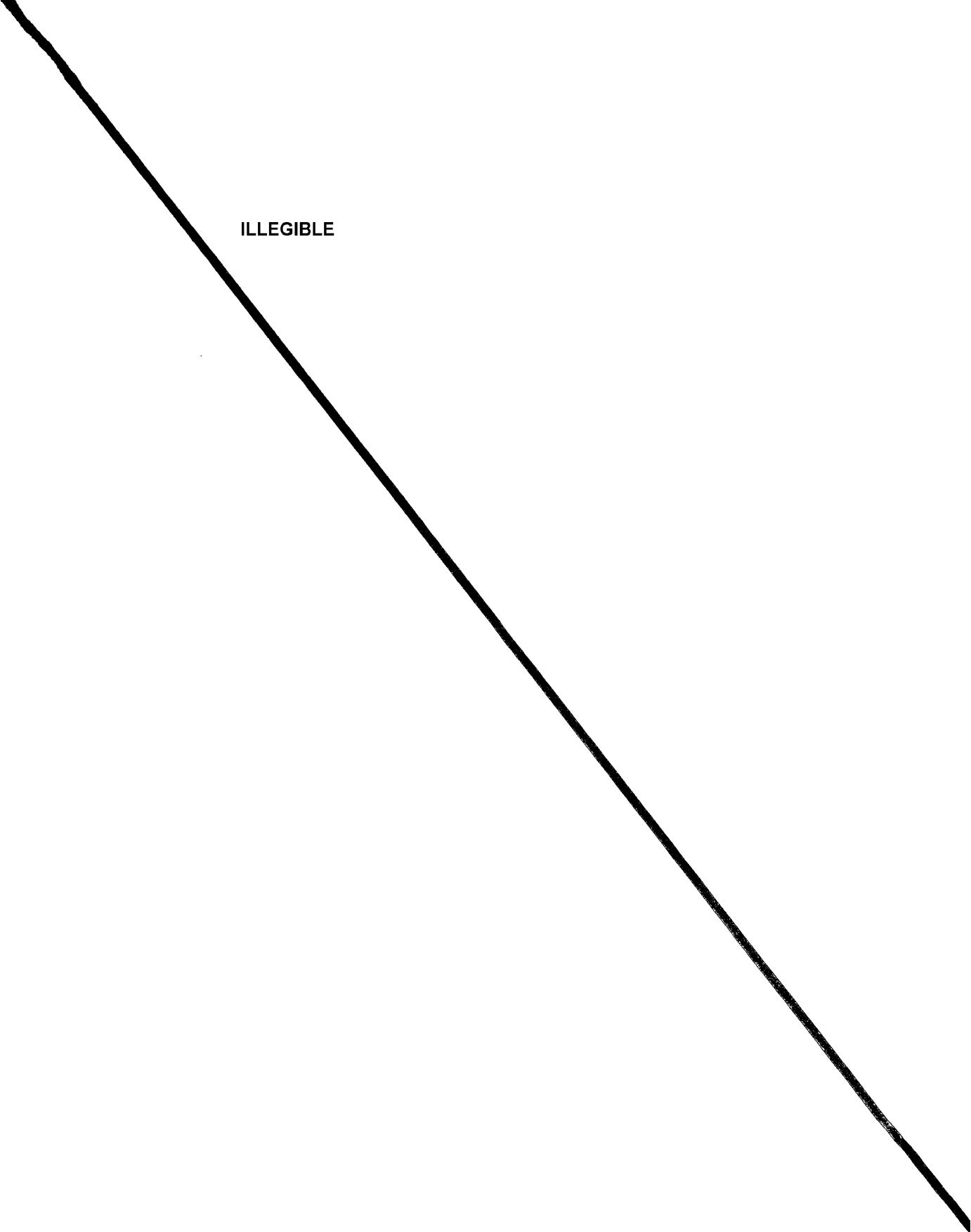
PLASTUNOV, M.B., dotsent

Cystotomy with extraperitonealization of the bladder. Khirurgija no.
9:14-17 S '54. (MLRA 7:12)

1. Iz urologicheskoy kliniki (zav. dotsent M.B.Plastunov) L'vov-
skogo meditsinskogo instituta (dir. prof. L.N.Kuzmenko)
(BLADDER, surgery,
cystotomy)

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ILLEGIBLE



PLASTUNOV, A.B. (L'vov)

Some urgent problems in the etiology, prophylaxis, and treatment
of threatened abortion. Fel'd. i akush. 24 no.12:14-18 D 1959.
(MIRA 13:2)

(ABORTION)

1. PLASTUNOV, A. B.
2. USSR (600)
4. Vagina - Diseases
7. Case of elephantiasis of external genitalia. Akush. i gin. no. 6, 1952
9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

PLASTUNOV, A.B.

Sacral-gluteal teratomas in newborn infants. Vop. okh. mat. i det.
(MIA 11:13)
6 no.3:92-93 Mr '61.

1. Iz kafedry akusherstva i ginekologii (zaveduyushchiy - dotsent
A.Kh.Babadagly) L'vovskogo meditsinskogo instituta.
(INFANTS (NEWBORN)--DISEASES) (TUMO:3)

PLASTUNOV, A.B., assistant

Nicotinic acid (vitamin PP) therapy of threatened abortion [with summary in English]. Akush. i gin. 35 no.1:39-42 Ja-F '59.
(MIRA 12:2)

1. Iz kafedry akushestva i ginekologii pediatriceskogo i sanitarno-gigienicheskogo fakul'teta (zav. - dots. A.Kh. Babadagly) i kafedry farmakologii (zav. - zasluzhenny deyatel' nauki USSR prof. Yu.A. Petrovskiy) L'vovskogo meditsinskogo instituta (dir. - prof. L.N. Kuzmenko).

(ABORTION, prev. & control,
threatened, nicotinic acid ther. (Rus))
(NICOTINIC ACID, ther. use,
threatened abortion prev. (Rus))

PLASTUNOV, A.B.

A method for the prolonged control of the effect of drugs depressing uterine contractions in a long-term experiment. Farm. i toks. 22 no.3: 277-279 My-Je '59. (MIRA 12:7)

1. Kafedra akusherstva i ginekologii pediatriceskogo i sanitarno-gigiyenicheskogo fakul'tetov (zav. - dotsent A.Kh. Babadagly) i kafedra farmakologii (zav. - zasluzhennyy deyatel' nauki USSR prof. G. A. Petrovskiy [deceased] L'vovskogo meditsinskogo instituta.

(VITAMIN E, eff.

on uterus constrictions, control of depressing activity
(rus))

(PROGESTERONE, eff.

same)

(UTERUS, eff. of drugs on,

progesterone & vitamin E, control of contraction-depressing eff. (Rus))

PLASTUNOV, A.B.

Use of bromine and caffeine in treating incipient abortion.
Vop. okh. mat. i det. 4 no.2:43-46 Mr-Ap '59. (MIRA 12:5)

1. Iz kafedry akusherstva i ginekologii pediatriceskogo i
sanitarno-gigienicheskogo fakul'tetov (zav. - dots. A.Kh.
Babadagly) i kafedry farmakologii (zav. - zasluzhennyj deyatel'
nauki USSR prof. Yu.A.Petrovskiy) L'vovskogo meditsinskogo
instituta.

(PREGNANCY, COMPLICATIONS OF) (SODIUM BROMIDE) (CAFFEINE)

PLASTUNOV, A.B., assistent

Treating threatened interrupted pregnancy with sleep therapy by use
of medicinal and urethane. Azerb. med. zhur. no. 5:68-72 May '61.
(MIRA 14:4)

1. Iz kafedry akusherstva i ginekologii pediatricheskogo fakul'teta
(zav. - dotsent A.Kh. Babadagly i kafedry farmakologii (zav. -
zasl.deyatel' nauki, prof. Yu.A. Petrovskiy) L'vovskogo meditsinskogo
instituta.

(PREGNANCY, COMPLICATIONS OF) (SLEEP--THERAPEUTIC USE)
(BARBITAL) (CARBAMIC ACID)

PLASTUNOV, A.B., assisten

Rare case of a monstrosity in the newborn with complete absence of
upper and lower extremities. Azerb. med. zhur. no. 8:62-63 Ag '60.
(MIRA 13:8)

1. Iz kafedry akusherstva i ginekologii (zav. - dotsent
A.Kh. Babadagly) pediatriceskogo fakul'teta L'vovskogo
meditsinskogo instituta.

(MONSTERS)

PLASTUNOV, A.B., assistant

Use of vitamin E and progesterone in threatened abortion.
Vsp. okh.mat.i det. 7 no.12:56-60 D:62. (MIRA 16:7)

I. Kafedra akusherstva i ginekologii pediatriceskogo fakul'teta
(zav.-dotsent A.Kh.Babadagly) L'vovskogo meditsinskogo instituta
(dir. prof. L.N.Kuzmenko).
(TOCOPHEROL) (PROGESTERONE) (ABORTION)

PLASTUNOV, A.B. (L'vov)

Two cases of spontaneous subcutaneous emphysema in labor. Kaz. med.
zhur. no.6:89 N-D '60. (MIRA 13:12)
(PREGNANCY, COMPLICATIONS OF) (EMPHYSEMA)

PLASTUNOV, A.B.. (assistant)

Effect of bromine and caffeine in association with opiates in the treatment of patients with threatening abortion. Azerb. med. zhur. 41 no.1:39-44 Ja '64. (MIRA 17:12)

1. Iz kafedry akusherstva i ginekologii pediatriceskogo fakul'teta (zav. - dotsent A.Kh.Babadeg'v) L'vovskogo meditsinskogo instituta (direktor - prof. L.N.Kuzmenko).

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PLATZMANN, A. B., Jr. 1912

1912-1965

Librarian, National Bureau of Standards, Washington, D.C.
77-44-165.

1. Is a citizen of the United States and is a member of the American
(Aviation) Association of the National Bureau of Standards
Institute (director of the Division of Aerodynamics).